

Release Notes

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Junos OS Evolved Release 25.2X100-D30

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Introduction

Junos OS Evolved runs on the following Juniper Networks® hardware: ACX Series, PTX Series and QFX Series. Use these release notes to find new and updated features, software limitations, and open issues for Junos OS Evolved Release 25.2X100-D30 for QFX Series.

You can find release notes for all Junos OS Evolved releases at [Junos OS Evolved Documentation | Juniper Networks](#)

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What's New in 25.2X100-D30

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Learn about new features introduced in this release for QFX Series switches.

Chassis

Platform software support for RE and Chassis (QFX5250-64OE)—We provide support for inbuilt routing engine, FRU management, sensor monitoring, power supply, 2x2 Power Supply Unit (PSU) redundancy, 8 Fan Trays with 7+1 redundancy. You can manage the fan speed and cooling mechanism according to the environment monitoring (EM) policy. We also support all features relevant to fixed form factor switches.

[See [show chassis hardware](#) and [show chassis fpc](#)].

Class of Service (CoS)

Advertising and filtering of LLDP DCBX ETS configuration and recommendation TLVs (QFX5130-32CD, QFX5130-48C, QFX5130-48CM, QFX5130E-32CD, QFX5220, QFX5230-64CD, QFX5240-64OD, QFX5240-64QD, QFX5241-32OD, QFX5241-32QD, QFX5241-64OD, QFX5241-64QD, QFX5700, and QFX5700E)—You can advertise and discover Enhanced Transmission Selection (ETS) over LLDP using DCBX ETS configuration (subtype 9) and recommendation (subtype A) type, length, and value (TLV) entries. Align traffic classes and bandwidth across peers without changing local ETS operation. Configure LLDP and DCBX on interfaces, and include ETS TLVs with `tlv-select dcbx-ets-configuration/dcbx-ets-recommendation` or `tlv-filter dcbx-ets-configuration/dcbx-ets-recommendation` options globally at the `[edit protocols lldp]` hierarchy level or on an interface at the `[edit protocols lldp interface interface-name]` hierarchy level. Optionally disable ETS advertisement altogether on an interface with `enhanced-transmission-selection no-auto-negotiate` at the `[edit protocols dcbx interface interface-name]` hierarchy level. Verify exchanges with `show lldp neighbors interface interface-name` and `show dcbx neighbors interface interface-name` commands. The device supports up to eight traffic classes. DCBX runs on non-management interfaces and on unit 0.

[See [Understanding DCBX](#).]

EVPN

Group-Based Policy (GBP) support (QFX5130-32CD and QFX5700)—This release introduces GBP support on the specified switches. GBP allows you to micro-segment your network by grouping clients together and applying security policies per group. It enforces policy using Scalable Group Tags (SGTs), which decouple clients from their physical network location so policies remain

consistent even as clients move across VLANs, switches, or other attachment points. By applying policies to groups instead of individual flows, GBP delivers location-agnostic, scalable, and simplified network security management.

VXLANsec support using MACsec (QFX5130-48CM)—VXLANsec secures VXLAN data traffic between VTEPs by encrypting all VNIs in a single MACsec session per VTEP pair to ensure confidentiality and integrity. The underlay stays unencrypted. Forwarding begins after the session is established. This feature adds a `remote-ip` option to the `set security macsec interfaces` statement, and the `show security macsec connections interfaces` and `show security mka sessions interfaces` commands to accept a remote VTEP IP address as input.

Configure a connectivity-association for the remote VTEP IP on MACsec-capable interfaces as follows:

```
set security macsec connectivity-association CA cipher-suite gcm-aes-xpn-256
set security macsec connectivity-association CA security-mode static-cak
set security macsec connectivity-association CA pre-shared-key ckn ckn-key
set security macsec connectivity-association CA pre-shared-key cak cak-key
set security macsec remote-ip remote-vtep-IP connectivity-association CA
```

Verify the connection and sessions with:

```
show security macsec connections remote-ip remote-vtep-IP
show security mka sessions remote-ip remote-vtep-IP
```

Use a forwarding table policy to exclude non-MACsec next hops.



NOTE:

VXLANsec and IFD/IFL macsec cannot be used together.

[See [macsec](#), [connectivity-association](#), [show security macsec connections](#), and [show security mka sessions](#).]

Support for P-VLAN over EVPN-VXLAN (QFX5130-32CD, QFX5130-48C, QFX5130-48CM, QFX5130E-32CD, QFX5700, and QFX5700E)—You can extend private VLAN (P-VLAN) isolation across EVPN-VXLAN fabrics. Map each primary and secondary VLAN to a unique virtual network identifier (VNI). Ensure consistent mappings on all VXLAN tunnel endpoints (VTEPs). MAC learning uses the primary VLAN, and broadcast, unknown unicast, and multicast (BUM) forwarding honors P-VLAN rules. You configure P-VLANs for EVPN-VXLAN by defining secondary VLANs under a MAC-VRF routing instance, then linking them to a primary VLAN, as shown in the following examples.

Create an isolated VLAN:

```
set routing-instances RT vlans vlan401_i vlan-id 401
set routing-instances RT vlans vlan401_i private-vlan isolated
set routing-instances RT vlans vlan401_i vxlan vni 4010
```

Create a community VLAN:

```
set routing-instances RT vlans vlan402_c vlan-id 402
set routing-instances RT vlans vlan402_c private-vlan community
set routing-instances RT vlans vlan402_c vxlan vni 4020
```

Create a primary VLAN and link it to the secondary VLANs:

```
set routing-instances RT vlans vlan400_p vlan-id 400
set routing-instances RT vlans vlan400_p isolated-vlan vlan401_i
set routing-instances RT vlans vlan400_p community-vlans vlan402_c
```

You can verify the configuration with the `show vlans vlan-name detail` command.

P-VLAN over EVPN-VXLAN limitations:

- VTEP-to-VTEP traffic is blocked except in data center interconnect (DCI) scenarios.
- Only the primary VLAN supports an integrated routing and bridging (IRB) interface.

[See [private-vlan](#) and [show vlans](#).]

Duplicate IP Address Detection for IP Mobility on an EVPN-VXLAN Network (QFX5130-32CD, QFX5130-48C, QFX5130-48CM, QFX5130E-32CD, QFX5140-24CD8O, QFX5240-64OD, QFX5240-64QD, QFX5241-32OD, QFX5241-64OD, QFX5700, and QFX5700E)—IP mobility is characterized by endpoints, such as virtual machines, containers, and physical hosts moving within a data center without changing their IP addresses. Devices in the EVPN-VXLAN network must quickly converge on updated routing information and maintain IP reachability. As endpoints move within the EVPN-VXLAN network, multiple MAC/IP advertisement route messages for the same (duplicate) IP address can exist in the control plane. If there are misconfigurations or excessive endpoint movements, devices must identify and respond to these duplicate IP addresses. Duplicate IP address detection supports IP mobility by providing the mechanism to detect and log duplicate IP addresses and it enables you to configure the device's response to the detected duplicate IP address.

To configure duplicate IP address detection options, include the `duplicate-ip-detection` statement at the `[edit protocols evpn]` hierarchy level.

[See [Duplicate IP Address Detection for IP Mobility](#).]

High Availability (HA) and Resiliency

Support for Ethernet link-level flow control (QFX5130-32CD, QFX5130-48C, QFX5130-48CM, QFX5130E-32CD, QFX5140-24CD8O, QFX5220, QFX5230-64CD, QFX5240-64OD, QFX5240-64QD, QFX5241-32OD, QFX5241-64OD, QFX5241-64QD, QFX5250-64OE, QFX5250-64OE-L, QFX5700, and QFX5700E)—Enable Ethernet link-level flow control on QFX5K Junos OS Evolved interfaces to reduce congestion-related packet loss with IEEE 802.3x PAUSE frames. Configure flow control with the `set interfaces ether-options flow-control` command or disable it with the `set interfaces ether-options no-flow-control` command. Verify the state with the `show interfaces detail` command.

[See [ether-options](#).]

Interfaces

Support for native 1600G ORHS with 2x/4x/8x channelization and 25G/10G SFP28 (QFX5250-64OE)—Configure QFX5250-64OE/OE-AO ports for native 1600 Gbps/800 Gbps/400 Gbps on OSFP-RHS (ORHS) and 25 Gbps/10 Gbps on SFP28. Channelize ORHS ports into 2x [800/400/200], 4x [400/200/100], or 8x [200/100/50].

[See [Port Speed on QFX5250-64OE/OE-L Switches](#).]

Interfaces and Chassis

Per-interface option to keep Tx laser active during administrative disable (QFX5240-64OD, QFX5240-64QD, QFX5241-32OD, QFX5241-64OD, QFX5241-64QD, QFX5250-64OE, and QFX5250-64OE-L)—You can keep an optical module's transmit laser active when an Ethernet interface is administratively disabled on supported QFX5K Junos OS Evolved platforms. The interface forwards no traffic, link-down alarms remain active, and peer and control-plane semantics remain unchanged. Use the `optics-options laser-on-when-admin-disabled` command to configure the Tx laser active during administrative disable. You can verify laser state with existing `show interfaces diagnostics optics-profile` command. The `show interfaces` command shows if the interface is administratively down.

Services Applications

Software-based flow-based telemetry (FBT) support (QFX5240-64OD, QFX5240-64QD, QFX5241-64OD, and QFX5241-64QD)—You can configure software-based flow-based telemetry (FBT) for VXLAN-encapsulated traffic only. Software-based FBT for VXLANs enables per-flow-level analytics for VXLAN-encapsulated traffic that uses either a centrally routed bridging (CRB) overlay

or an edge-routed bridging (ERB) overlay. Software-based FBT for VXLANs uses inline monitoring services to create flows, collect them, and export them to a collector.

Software-based FBT for VXLANs differs from the hardware-based FBT feature in the following ways:

- Only IRB interfaces are supported.
- Only one inline-monitoring instance and one collector are supported.
- The flow table keys include fields important for VXLANs, and the IPv4 and IPv6 flow table keys include different fields.
- You cannot configure an option template identifier or a forwarding class.

[See [Software-Based Flow-Based Telemetry for VXLANs \(QFX5120, QFX5240, and QFX5241\)](#).]

Source Packet Routing in Networking (SPRING) or Segment Routing

Support for SR-MPLS Features (QFX5240-64OD, QFX5240-64QD, QFX5241-32OD, and QFX5241-32QD)—We support the following SR-MPLS features:

- Segment routing label-switched paths (LSPs)
- Equal-cost multipath (ECMP) load balancing for Segment Routing over MPLS (SR-MPLS) traffic
- SR-MPLS over link aggregation group (LAG)
- Layer 3 VPN (IPv4 and IPv6) services over an SR-MPLS network

These features enable scalable SR-MPLS forwarding, efficient multipath traffic distribution, and reliable VPN service delivery across data center and service provider network

[See [Segment Routing LSP Configuration](#) and [Color-Based Mapping of VPN Services for SR-MPLS Segment Routing LSPs](#).]

Support for SR-MPLS Features (QFX5250-64OE)—We support the following features:

- Segment routing label-switched paths (LSPs)
- Equal-cost multipath (ECMP) load balancing for Segment Routing over MPLS (SR-MPLS) traffic
- SR-MPLS over link aggregation group (LAG)
- Layer 3 VPN (IPv4 and IPv6) services over an SR-MPLS transport

These features enable scalable SR-MPLS forwarding, efficient multipath traffic distribution, and reliable VPN service delivery across data center and service provider network

[See [Segment Routing LSP Configuration](#) and [Color-Based Mapping of VPN Services for SR-MPLS Segment Routing LSPs](#).]

Additional Features

We've extended support for the following features to these platforms:

Support for transceivers, optical interfaces, DAC cables, and performance monitoring (QFX5240-64QD)—Use performance monitoring for QFX5240-64QD switches to measure current and historical metrics. The switch accumulates these metrics into 15-minute and 1-day intervals. You can configure the 15-minute interval length. You can view these metrics by using the [show interfaces transport pm](#) command. View these metrics with the [show interfaces transport pm](#) command.

Support for MAC Limiting (QFX5130-32CD, QFX5130-48C, QFX5130-48CM, QFX5130E-32CD, QFX5700, and QFX5700E)—MAC limiting helps prevent the Ethernet switching table from becoming overloaded by restricting the number of MAC addresses that can be learned on Layer 2 interfaces.

[See [Configuring MAC Limiting](#).]

MPLS support (QFX5240-64OD, QFX5240-64QD, QFX5241-32OD, QFX5241-32QD, and QFX5250-64OE)—

- Static and dynamic label-switched paths (LSPs)
- LDP and RSVP
- RSVP-Traffic Engineering
- Penultimate-hop popping (PHP)
- SR-MPLS
- SR-ISIS
- MPLS with ECMP
- MPLS over LAG
- L3 VPN for IPv4 and IPv6
- IPv6 VPN routing over MPLS

[See [MPLS Overview](#).]

Supported transceivers, optical interfaces, and DAC cables (QFX5130-32CD, QFX5130-48C, QFX5130-48CM, QFX5130E-32CD, QFX5220, QFX5220-32CD, QFX5230-64CD, QFX5240-64OD, QFX5240-64QD, QFX5241-32OD, QFX5241-64OD, QFX5241-64QD, QFX5250, and QFX5700E)—

Supported transceivers, optical interfaces, and DAC cables—Select your product in the Hardware Compatibility Tool ([Hardware Compatibility Tool](#)) to view supported transceivers, optical interfaces, and direct attach copper (DAC) cables for your platform or interface module. We update the HCT and provide the first supported release information when the optical transceiver becomes available.

EVPN-VXLAN Type-5 Routing Instance Support (QFX5250)—Support includes:

ECMP in underlay and overlay

Layer 3 underlay with integrated routing and bridging (IRB) and link aggregation groups (LAGs)

IPv6 user traffic support

In-service software upgrade (ISSU) support

Type-5 IP-VRF to IP-VRF routing instance with and without seamless stitching

Symmetric IRB

Type-2 and Type-5 route coexistence

[See [Understanding EVPN with VXLAN Data Plane Encapsulation](#), [IP Fabric Underlay Network Design and Implementation](#), [overlay-ecmp](#), [Understanding EVPN Pure Type 5 Routes](#), [EVPN Type 2 and Type 5 Route Coexistence with EVPN-VXLAN](#), [NSR and Unified ISSU Support for EVPN](#), and [irb-symmetric-routing](#).]

Monitor performance of QDD-400G-ZR-M optics (QFX5130-32CD, QFX5130E-32CD, and QFX5220)—Monitor the performance of QDD-400G coherent ZR optics and receive threshold-crossing alert (TCA) information to efficiently manage the optical transport link. Accumulate performance metrics into 15-minute and 1-day interval bins. Use the `show interfaces transport pm` command to view current and historical performance data.

[See [optics-options](#) and [show interfaces transport pm](#).]

Monitor performance of QDD-400G-ZR-M-HP optics (QFX5130-32CD, QFX5130-48C, QFX5130-48CM, QFX5220, QFX5230-64CD, and QFX5240-64QD)—Monitor the performance of QDD-400G coherent ZR high power (HP) optics and receive threshold-crossing alert (TCA) information to efficiently manage the optical transport link. Accumulate performance metrics into 15-minute and 1-day interval bins. Use the `show interfaces transport pm` command to view current and historical performance data.

[See [optics-options](#) and [show interfaces transport pm](#).]

MAC limit support (QFX5130-32CD, QFX5130-48C, QFX5130-48CM, QFX5130E-32CD, QFX5700, and QFX5700E)—Support is added for MAC limiting

[See [Understanding MAC Limiting and MAC Move Limiting](#).]

Known Limitations in 25.2X100-D30

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Learn about known limitations in this release for QFX Series switches.

For the most complete and latest information about known Junos OS Evolved defects, use the Juniper Networks online [Junos OS Evolved Problem Report Search](#) application.

General Routing

- On a QFX5140 switch, when an MPLS packet ingresses on sub-interface or IRB interface with a vlan-tag, it is not forwarded.

[PR1935329](#)

- `show mpls lsp statistics ingress` is not supported in 25.2X100-D30 release.

[PR1940550](#)

- When label action is PHP and ingress packet has only one label matching PHP action label and that packet's IP header has Router Alert (IP Options), the QFX5140 does not update ether Type field in Ethernet Header of egress packet. This might result in peer device dropping the packet.

[PR1951690](#)

Open Issues in 25.2X100-D30

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Learn about open issues in this release for QFX Series switches.

For the most complete and latest information about known Junos OS Evolved defects, use the Juniper Networks online [Junos OS Evolved Problem Report Search](#) application.

General Routing

- On QFX5250-64OE platform, interface et-0/0/66 is the NAC internal interface between CPU and Packet Forwarding Engine. Though this is not a front panel interface which can be used, some of the CLI show commands display this interface. Commands: `show chassis led show chassis pic fpc-slot 0 pic-slot 0`.

[PR1968510](#)

- In Junos OS Evolved platform such as QFX5240 may report sporadic cosmetic Kernel APEI Generic Hardware correctable errors.

[PR1839642](#)

- On Junos OS Evolved platforms, when the SFTP protocol uses the `mgmt_junos` routing instance to communicate with the SFTP server, it fails.

[PR1833705](#)

Interfaces and Chassis

- Link with the DAC (SFP56-50G-DAC-3M) comes up with 25G default speed configuration when switch is rebooted. Hence, when 50G speed configuration is applied, peer side sees the link flap. [PR1836697](#)

User Interface and Configuration

- On all Junos OS Evolved QFX Series platforms, which do not verify the syntax and integrity of the saved rescue configuration file when performing a configuration check, rescue configuration check fails.

[PR1907238](#)

Migration, Upgrade, and Downgrade Instructions

For products impacted, see [Feature Explorer](#).

Follow these steps to upgrade your Junos OS Evolved software:

1. Using a Web browser, navigate to the All Junos Platforms software download URL on the Juniper Networks webpage: [Downloads](#).
2. In the Find a Product box, enter the Junos OS platform for the software that you want to download.
3. Select Junos OS Evolved from the OS drop-down list.
4. Select the relevant release number from the Version drop-down list.
5. In the **Install Package** section, select the software package for the release.
6. Log in to the Juniper Networks authentication system using the username (generally your e-mail address) and password supplied by a Juniper Networks representative.
7. Review and accept the End User License Agreement.
8. Download the software to a local host.
9. Copy the software to the device or to your internal software distribution site.
10. Install the new package on the device.

NOTE: We recommend that you upgrade all software packages out of band using the console because in-band connections are lost during the upgrade process.

For more information about software installation and upgrade, see [Software Installation and Upgrade Overview \(Junos OS Evolved\)](#). For more information about EOL releases and to review a list of EOL releases, see [Junos OS Evolved Dates & Milestones - Juniper Networks](#).

Documentation Updates

There are no documentation updates for this release.

Licensing

In 2020, Juniper Networks introduced a new software licensing model. The Juniper Flex Program comprises a framework, a set of policies, and various tools that help unify and thereby simplify the multiple product-driven licensing and packaging approaches that Juniper Networks has developed over the past several years.

The major components of the framework are:

- A focus on customer segments (enterprise, service provider, and cloud) and use cases for Juniper Networks hardware and software products.
- The introduction of a common three-tiered model (standard, advanced, and premium) for all Juniper Networks software products.
- The introduction of subscription licenses and subscription portability for all Juniper Networks products, including Junos OS and Contrail.

For information about the list of supported products, see [Juniper Flex Program](#).

Finding More Information

- **Feature Explorer**—Juniper Networks Feature Explorer helps you to explore software feature information to find the right software release and product for your network.

[Feature Explorer](#)

- **PR Search Tool**—Keep track of the latest and additional information about Junos OS open defects and issues resolved.

[index?page=prsearch](#).

- **Hardware Compatibility Tool**—Determine optical interfaces and transceivers supported across all platforms.

[Hardware Compatibility Tool](#)

NOTE: To obtain information about the components that are supported on the devices and the special compatibility guidelines with the release, see the Hardware Guide for the product.

- **Juniper Networks Compliance Advisor**—Review regulatory compliance information about Common Criteria, FIPS, Homologation, RoHS2, and USGv6.

Requesting Technical Support

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Technical product support is available through the Juniper Networks Technical Assistance Center (JTAC). If you are a customer with an active Juniper Care or Partner Support Services support contract, or are covered under warranty, and need post-sales technical support, you can access our tools and resources online or open a case with JTAC.

- JTAC policies—For a complete understanding of our JTAC procedures and policies, review the JTAC User Guide located at <https://www.juniper.net/us/en/local/pdf/resource-guides/7100059-en.pdf>.
- Product warranties—For product warranty information, visit [Product Warranty Policy - Support - Juniper Networks](#).
- JTAC hours of operation—The JTAC centers have resources available 24 hours a day, 7 days a week, 365 days a year.

Self-Help Online Tools and Resources

For quick and easy problem resolution, Juniper Networks has designed an online self-service portal called the Customer Support Center (CSC) that provides you with the following features:

- Find CSC offerings: [Support](#)
- Search for known bugs: <https://prsearch.juniper.net/>
- Find product documentation: [Documentation](#)
- Find solutions and answer questions using our Knowledge Base: [CEC Juniper Community](#)
- Download the latest versions of software and review release notes: [Support](#)

- Search technical bulletins for relevant hardware and software notifications: [CEC Juniper Community](#)
- Join and participate in the Juniper Networks Community Forum: [Home - HPE Networking Community](#)

To verify service entitlement by product serial number, use our Serial Number Entitlement (SNE) Tool: <https://entitlementsearch.juniper.net/entitlementsearch/>

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- Download the latest versions of software and review release notes: [Support](#)
- Search technical bulletins for relevant hardware and software notifications: [CEC Juniper Community](#)
- Join and participate in the Juniper Networks Community Forum: [Home - HPE Networking Community](#)

To verify service entitlement by product serial number, use our Serial Number Entitlement (SNE) Tool: <https://entitlementsearch.juniper.net/entitlementsearch/>

Creating a Service Request with JTAC

You can create a service request with JTAC on the Web or by telephone.

- Visit [Juniper Support Portal: Case Management, Product Support & More](#)
- Call 1-888-314-JTAC (1-888-314-5822 toll-free in the USA, Canada, and Mexico).

For international or direct-dial options in countries without toll-free numbers, see [Contact - Support - Juniper Networks](#).

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Revision History

01-Oct-26 - Revision 1, Junos OS Evolved Release 25.2X100-D30.